
EPA REGION 9/SOUTH COAST AQMD MEETING

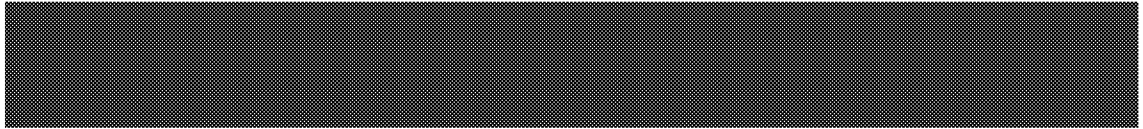
RECLAIM TRANSITION & NEW SOURCE REVIEW

AUGUST 13, 2019
TELECONFERENCE



NEW SOURCE REVIEW

Equipment Replacements for BARCT



2.

Background

- Supply of offsets as RECLAIM facilities transition to command-and-control is a concern
- Availability of offsets are needed to ensure permits can be issued
- South Coast AQMD staff is evaluating a variety of areas to reduce the demand and increase supply of offsets
- Working within the regulatory framework of the:
 - Federal Clean Air Act
 - SB288 which prohibits the South Coast AQMD from amending New Source Review rules or regulations to be less stringent than those that existed on December 30, 2002

Initial Concepts for Reducing Demand and Increasing Supply of Offsets

Reducing Demand of Offsets

Pollutant Thresholds for Major Sources

Offset Exemptions

NSR Applicability Using Air Quality Modeling

Increasing Supply of Offsets

Refining BARCT Discounting Methodology

Conversion of RTCs for ERCs

Mobile Sources

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Framing the Issues

Reducing Demand for Offsets

Pollutant Thresholds for
Major Sources



Question 1: Can a Major Polluting Facility be
Defined by Pollutant?

Offset Exemptions



Question 2: What scenarios are exempt from
offsetting when complying with a BARCT rule?

NSR Applicability Using
Air Quality Modeling



Question 3: Can air quality modeling be used
to demonstrate no net increase?

Question 1: Can a Major Polluting Facility be Defined by Pollutant?

■ Background

- Regulation XIII, Rule 1302 definition of major polluting facility references a facility which emits or has the potential to emit above specific thresholds
- South Coast AQMD BACT Guidelines defines a major polluting facility¹ adds more specificity by stating that, "If a threshold for any one criteria pollutant is equaled or exceeded, the facility is a major polluting facility"
- A facility may exceed the threshold for NOx, and be under the thresholds for other pollutants

¹ Federal Clean Air Act uses major source or major stationary source in referencing a major polluting facility

Pollutant Thresholds for Major Polluting Facility

Pollutant	South Coast Air Basin	Riverside County Portion of the Salton Sea	Riverside County of Mojave Dessert
VOC	10	25	100
NOx	10	25	100
SOx	70	70	100
CO	50	100	100
PM10	70	70	100
PM2.5	70	---	---

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Discussion and Analysis

- Proposed revisions to NSR applicability to address NSR Reform and offset calculations are specific to major polluting facilities
- Defining a major polluting facility, based on each individual pollutant
 - Is a more accurate representation if a facility is a major polluting facility
 - Does not require facilities to unnecessarily comply with major source NSR requirements
 - Can reduce the demand for offsets when a facility does not exceed the major polluting facility threshold for a specific pollutant
- Staff is not aware of any conflict with the Federal Clean Air Act
- No impact to SB288 as existing New Source Review bases applicability and offsets for major source modifications on PTE-to-PTE

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Recommendation

Recommendation for Question 1: Yes, a Major Polluting Facility be defined by pollutant.

- Major polluting facility can be defined by pollutant
- No conflict with Federal Clean Air Act of SB288
- Can reduce the demand for offsets, when NSR applicability and offset calculations are amended for modifications at major polluting facility
- Provide additional clarity to Rule 1302 and revise South Coast AQMD BACT Guidelines to define a major polluting facility based on exceeding each individual pollutant threshold

Question 2: What scenarios are exempt from offsetting when complying with a BARCT rule?

■ Background

- Rule 1304 (c)(4) exempts a facility from offsetting if:
 - ✧ Source is installed or modified solely to comply with District, state, or federal air pollution control laws, rules, regulations or orders, as approved by the Executive Officer or designee, and provided there is no increase in maximum rating
- Federal Clean Air Act (CAA) 182 (e)(2) exempts offsetting in Extreme Areas for
 - ✧ Modification of an existing source if such modification consists of installation of equipment required to comply with the applicable implementation plan, permit, or this chapter

Discussion and Analysis

- ※ Exemption under Rule 1304 (c)(4) is for offsets – no exemption for BACT
- ※ Adding more specificity to Rule 1304 (c)(4) as it could reduce the demand for offsets
- ※ Federal CAA 182 (e)(2) overlaps with Rule 1304 - if scenarios qualify for offsetting exemption under federal CAA 182 (e)(2) no additional offsetting obligation
- ※ Slight differences between Rule 1304 and federal CAA 182 (e)(2)
 - ※ Rule 1304 (c)(4) limits the exemption to those where there is no increase in maximum rating
 - ※ Both Rule 1304 (c)(4) and CCA 182 (e)(2) address retrofits and installation of equipment
- ※ Evaluated four scenarios that may qualify for an exemption from offsets under Rule 1304 and CAA 182 (e)(2)

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Analysis of Rule 1304 (c)(4)

"The source is installed or modified"

- Can apply to new equipment or retrofit

Regulatory Compliance

- Comply with District, state, or federal air pollution control laws, rules, regulations or orders

Other Limitations

- No increase in maximum rating

Rule 1304(c)(4) – Regulatory Compliance

"The source is installed or modified solely to comply with District, state, or federal air pollution control laws, rules, regulations or orders, as approved by the Executive Officer or designee, and provided there is no increase in maximum rating."

Analysis of Federal CAA 182 (e)(2)

**"modification
of an existing
source"**

- Federal reference to "existing source" is an existing facility

**"modification
consists of
installation of
equipment"**

- Can be interpreted as installation of pollution control equipment or new equipment (basic equipment)

**Regulatory
Compliance**

- Comply with applicable implementation plan, permit, or this chapter

Federal CAA 182 (e)(2) – Modifications

"The offset requirements of this part shall not be applicable in Extreme Areas to a modification of an existing source if such modification consists of installation of equipment required to comply with the applicable implementation plan, permit, or this chapter"

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Four Scenarios for Question 2

Scenario 1: What pollutants are exempt from offsetting when retrofitting equipment?

Scenario 2: Does a like-for-like replacement qualify for the offsetting exemption?

Scenario 3: Will the replacement of two or more units with one unit qualify for the offsetting exemption?

Scenario 4: Will the replacement of one unit with two or more units qualify for the offsetting exemption?

Scenario 5: Will the replacement of two or more units with two or more units qualify for the offsetting exemption?

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Scenario 1: What pollutants are exempt from offsetting when retrofitting equipment?

Example SCR is added to comply with the NOx limit in Rule 1146

Question Will an increase in PM emissions from SCR be exempt from offsets?

Analysis SCR is added to comply with South Coast AQMD rule
Retrofit consistent with Rule 1304 (c)(4) and CAA 182(e)(2)

Recommendation: Co-pollutants associated with retrofitting a unit to comply with a South Coast AQMD rule are exempt from offsetting

Scenario 2: Does a like-for-like replacement qualify for the offsetting exemption?

Example

Facility replaces an existing boiler with a new boiler to comply with the NO_x limit in Rule 1146

Question

If a unit is being replaced for the purpose of complying with a South Coast AQMD rule, is the new unit exempt from offsets?

Analysis

Replacement at BACT, no increase in capacity

Replacement is to comply with South Coast AQMD rule

Both Rule 1304 (c)(4) and CAA 182(e)(2) reference "install"

Recommendation: One for one equipment replacement to comply with a South Coast AQMD rule, with no increase in capacity, is exempt from offsetting

Scenario 3: Will the replacement of two or more units with one unit qualify for the offsetting exemption?

Example

Facility replaces two existing small boilers with one new large boiler to comply with the NO_x limit in Rule 1146

Question

If one unit replaces two or more existing units for the purpose of complying with a South Coast AQMD rule, is the new unit exempt from offsets?

Analysis

Replacement at BACT, no increase in total capacity

Replacement is to comply with South Coast AQMD rule

Both Rule 1304 (c)(4) and CAA 182(e)(2) reference "install"

Recommendation: An individual piece of equipment replacing two or more units to comply with a South Coast AQMD rule, with no increase in total capacity, is exempt from offsetting

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Scenario 4: Will the replacement of one unit with two or more units qualify for the offsetting exemption?

Example

Facility replaces an existing boiler with two or more boilers to comply with the NO_x limit in Rule 1146

Question

If a unit is being replaced for the purpose of complying with a South Coast AQMD rule, are the new units exempt from offsets?

Analysis

Replacements at BACT, no increase in total capacity

Replacements are to comply with South Coast AQMD rule

Both Rule 1304 (c)(4) and CAA 182(e)(2) references "install"

Recommendation: Two or more pieces of equipment that are replacing one unit to comply with a South Coast AQMD rule, with no increase in total capacity, are exempt from offsetting

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Scenario 5: Will the replacement of two or more units with two or more units qualify for the offsetting exemption?

Example

Facility replaces two or more boilers with two or more boilers to comply with the NO_x limit in Rule 1146

Question

If units are being replaced for the purpose of complying with a South Coast AQMD rule, are the new units exempt from offsets?

Analysis

Replacements at BACT, no increase in total capacity

Replacements are to comply with South Coast AQMD rule

Both Rule 1304 (c)(4) and CAA 182(e)(2) references "install"

Recommendation: Two or more pieces of equipment that are replacing two or more units to comply with a South Coast AQMD rule, with no increase in total capacity, are exempt from offsetting

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Recommendations Four Scenarios for Question 2

Scenario 1: Co-pollutants associated with retrofitting a unit to comply with a South Coast AQMD rule are exempt from offsetting

Scenario 2: One for one equipment replacement to comply with a South Coast AQMD rule, with no increase in capacity, is exempt from offsetting

Scenario 3: An individual piece of equipment replacing two or more units to comply with a South Coast AQMD rule, with no increase in total capacity, is exempt from offsetting

Scenario 4: Two or more pieces of equipment that are replacing one unit to comply with a South Coast AQMD rule, with no increase in total capacity, are exempt from offsetting

Scenario 5: Two or more pieces of equipment that are replacing two or more units to comply with a South Coast AQMD rule, with no increase in total capacity, are exempt from offsetting

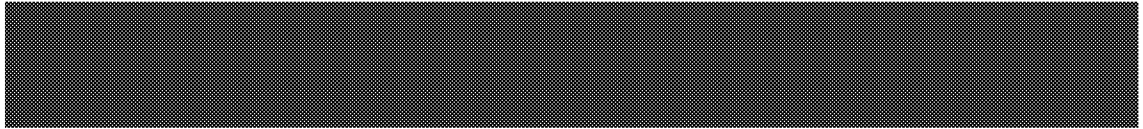
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Question 3: Can air quality modeling be used to demonstrate no net increase?

- Staff is evaluating the BACT applicability for co-pollutants emitted from the installations and modifications that are needed to comply with a South Coast AQMD rule
- Staff exploring potential options that would allow some flexibility for BACT for co-pollutants, such as:
 - Accounting for co-benefits based on regional or local modeling (e.g., 0.4 pounds of PM reduced for every pound of NOx reduced)
 - Looking into the BACT thresholds for state and federal major
 - Focus is on installation of SCR and applicability of NSR for PM
- Seeking input from U.S. EPA



AB 617 IMPLEMENTATION SCHEDULE



Implementation of BARCT Under AB 617

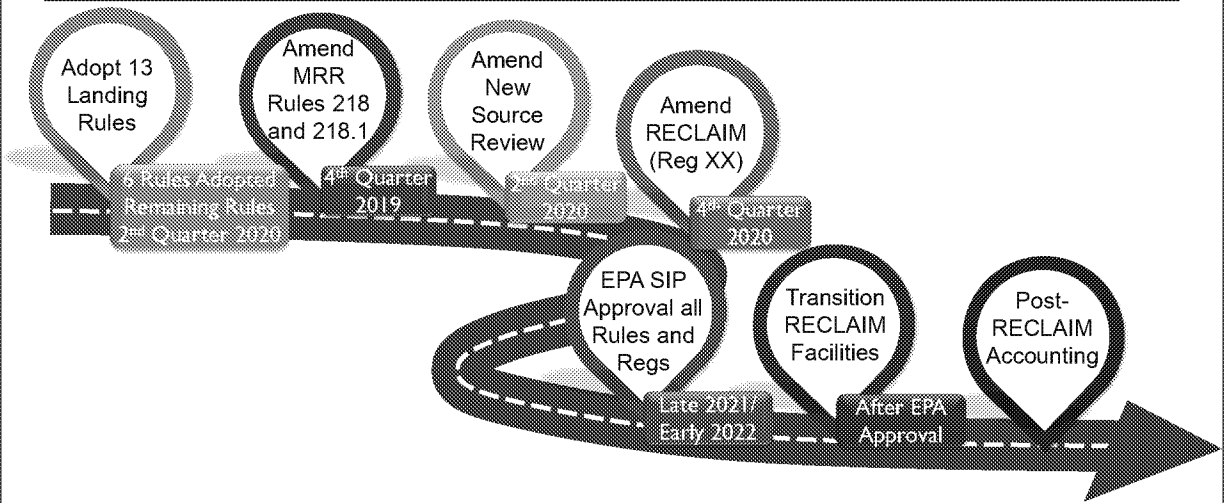
- Health and Safety Code Section 40920.6(c)(1) states:
 - On or before January 1, 2019, each district that is a nonattainment area for one or more air pollutants shall adopt an expedited schedule for the implementation of best available retrofit control technology (BARCT), by the earliest feasible date, but in any event not later than December 31, 2023
- Analysis
 - Ambiguity regarding the timing for “implementation of BARCT”
 - Goal is to require facilities to demonstrate compliance with NOx emission limits by December 31, 2023
 - There are situations where the process will begin before December 31, 2023 (submitting permits, permit approvals, etc.), however, full compliance (installation of pollution controls or replacement of equipment) may occur after December 31, 2023

Considerations in Establishing the Implementation Schedule

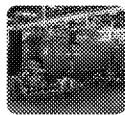
- Number of pieces of equipment at a facility
- Retrofit versus replacement
 - Operators that can commit to replacement of equipment that will be at BACT instead of BARCT will provide greater reductions (in many cases)
- Facility modernization projects
 - Operators that can commit to facility modernization of a group of equipment that will be retrofitted, replaced, or zero emission technologies
- Permitting, construction, installation, commissioning, and testing of equipment
- Refinery turnarounds

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Road to Transitioning RECLAIM to Command and Control



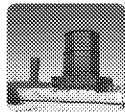
Adopted Landing Rules



Rules 1146, 1146.1, and 1146.2 -
Boilers, heaters, and steam generators

0.27

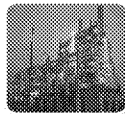
tons per day*



Rule 1118.1 - Non Refinery Flares

0

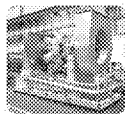
tons per day*



Rule 1135 - Electric Generating
Facilities

1.9

tons per day*



Rule 1134 - Gas Turbines

1.8

tons per day*

3.97

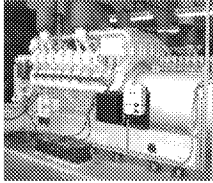
tons per day of NOx*

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*Sum of NOx reductions from RECLAIM facilities

Rulemaking Status

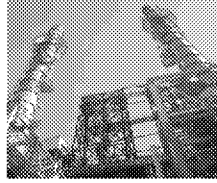
PAR 1110.2



Gaseous- and Liquid-Fueled Engines

- Maintaining existing NOx concentration
- Adding ammonia slip 5 ppm
- Public Hearing: October 2019

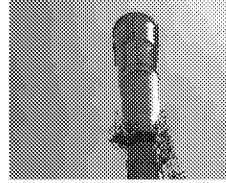
PR 1109.1



Refinery Equipment

- May 3, 2019 Board approved contracts for two third party consults for review of BARCT assessment
- Staff is close to completion of BARCT assessment
- Public Hearing: 2nd Quarter 2020

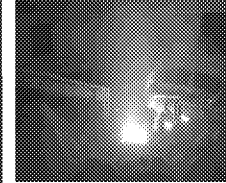
PAR 218 & 218.1



Monitoring, Reporting, and Recordkeeping – Continuous Emissions Monitoring Systems

- Applicable to non-RECLAIM and RECLAIM facilities
- Specifying CEMS requirements and performance standards
- Public Hearing: 1st Quarter 2020

PAR 1117

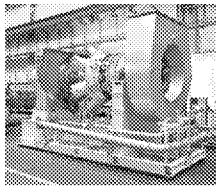


Glass Melting Furnaces

- Affects 2 facilities
- Both using Trimer Technology
- Public Hearing: December 2019 or 1st Quarter 2020

Rulemaking Status (Continued)

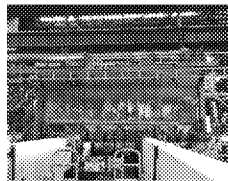
PAR 1147



Miscellaneous Combustion Sources

- Conducting BARCT analysis – coordinate with PR 1147.1, 1147.2, and 1147.3
- Public Hearing: 1st Quarter 2020

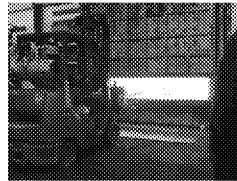
PR 1147.1



Large Miscellaneous Combustion Sources

- Conducting BARCT analysis
- Public Hearing: 1st Quarter 2020

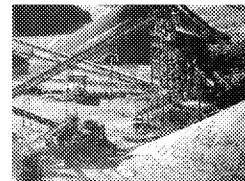
PR 1147.2



Metal Melting Facilities

- Conducting BARCT analysis
- Public Hearing: 1st Quarter 2020

P 1147.3



Aggregate Facilities

- Staff in data gathering phase
- Public Hearing: 3rd Quarter 2020